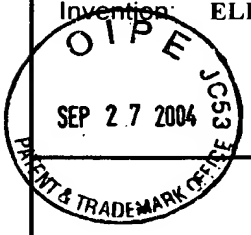
AF Brief

TRANSMITTAL OF APPEAL BRIEF (Large Entity)	Docket No. R.36445

In Re Application Of: **Detlef LAUK**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
09/889,309	October 22, 2001	Iraj Mohandesi	02119	2834	2314

Invention: **ELECTRIC DRIVE UNIT**



COMMISSIONER FOR PATENTS:

Transmitted herewith in triplicate is the Appeal Brief in this application, with respect to the Notice of Appeal filed on **July 29, 2004**

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Signature

Dated: **September 27, 2004**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appl. No.	:	09/889,309	Confirmation No. 2314
Applicant	:	Detlef LAUK	
Filed	:	October 22, 2001	
TC/A.U.	:	2834	
Examiner	:	Iraj Mohandesi	
Docket No.	:	R.36445	
Customer No.	:	02119	
For	:	ELECTRIC DRIVE UNIT	

Date: September 27, 2004

APPELLANT'S BRIEF (37 CFR 41.37)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Brief is filed in support of the Notice of Appeal filed on July 29, 2004, appealing the Examiner's decision making final a rejection of claims 18-23, 27-38 and 41-43.

The fee for this Appeal Brief of $330 ($340, if this appeal brief is filed on or after October 1, 2004) should be charged to Deposit Account No. 07-2100 by the attached deposit account form, submitted in duplicate.

I - REAL PARTY IN INTEREST

The real parties in interest in this appeal are the appellant named in the caption of the brief and Robert Bosch, GmbH as assignee.

II - RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal, there are no such appeals or interferences. None

III - STATUS OF CLAIMS

A. TOTAL NUMBER OF CLAIMS IN APPLICATION - Twenty-Five (25)

Claims in the application are: 18-43.

B. STATUS OF ALL THE CLAIMS

1. Claims canceled: 1-17.
2. Claims withdrawn from consideration but not canceled: None.
3. Claims pending: 18-43.
4. Claims allowed: 24.
5. Claims objected to: 25, 26, 39 and 40.
6. Claims rejected: 18-23, 27-38 and 41-43.

C. CLAIMS ON APPEAL

The claims on appeal are: 18-23, 27-38 and 41-43.

IV - STATUS OF AMENDMENTS

An amendment was filed on June 29, 2004, subsequent to the Final Rejection of March 29, 2004, but was not permitted entry. All other amendments have been entered.

V - SUMMARY OF CLAIMED SUBJECT MATTER

The claims of this application are directed to an electric drive unit. This drive unit includes electric motor structure, most of which is common in the art. This drive unit has a housing, the housing for the motor being recited as a pole housing, since it houses the poles of the electric motor. The drive unit also includes a gear housing which houses gears that are driven by the motor and in turn drive other, outside apparatus. This other, outside apparatus is not a part of this invention. The specification recites that the gear housing can by a single part, or that it can be a multi-part housing. All three of the independent claims in this application, claims 18, 24 and 43, recite that the gear housing is at least partially "in one piece" or "integral with" the pole housing. In other words, the motor housing is integral with at least one part of the gear housing.

It is pointed out that the term "short-circuit element" has been used throughout the specification and claims. In the amendment of June 29, 2004, it was attempted to replace this

phrase with the more common phrase - - pole piece - -. However this amendment was refused entry for other reasons. It is most likely that if the rejections set forth by the examiner in the Final Rejection are reversed by the Board of Appeals, such change will be made as the examiner appeared to be in agreement that this change would provide the disclosure more common US terminology.

For the sake of orientation, the structure of this invention will often be found in an automobile, for example as part of the drive mechanism for an electric opener for the windows of the automobile.

VI - GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. In the Final Rejection, at paragraph 1 the examiner has objected to the drawings for not showing a "one piece housing," saying that "The gear housing 10 is separated by 'short circuit element' 10 as Fig. 1 demonstrates.

2. Claims 18-21, 23, 27, 28, 30, 34-36, 38, 39 and 41-43 stand rejected under 35 U.S.C. 102 as being anticipated by Kobman et al (US 5,925,962). It is pointed out that paragraph 4 of the Final Rejection, which sets forth this rejection, is in disagreement with paragraph 9 of the Final Rejection which states that "claims ... 39 are objected to .... but would be allowable..." Thus it is assumed that claim 39 was included in the paragraph 4

rejection by mistake. However specific arguments for the allowability of claim 39 are included below.

3. Claims 31-33 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kobman et al '962 in view of Bobay et al (US 6,286,199).

4. Claims 22 and 37 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kobman et al '962 in view of Kabatnik et al (US 5,881,823). In line 4 of the paragraph which sets forth this rejection the examiner has referred to Bobay et al '199. It is appellants' belief that the examiner meant to refer to Kobman et al, as he refers to Kobman et al in line 9 of this paragraph.

VII - ARGUMENTS

(1) that the drawings do show a "one piece housing"

In the Final Rejection, at paragraph 1, the examiner has objected to the drawings for not showing the pole housing to be one piece with the gear housing.

While the record at present does not clearly reflect that the examiner is in agreement that this objection can be dropped, it is appellant's impression from a series of unofficial telephone interviews, plus from the personal interview of June 22, 2004, that the examiner is in agreement that this objection is no longer warranted. Nevertheless, the following argument is made against this objection.

Figure 1 includes a showing of two areas of pole housing 10, one near the middle of figure 1, the other near the bottom. Near the top of figure 1 gear housing 5 is clearly shown as integral with the pole housing 10, by means of the two components being a solid piece, having the same hatching with no breaks shown in the structure. Further, near the bottom of figure 1 the lower section of element 10 is also shown with the same hatching. Clearly, figure 1 indicates that all three, gear housing 5, pole housing 10 near the middle of figure 1, and pole housing 10 near the bottom of figure 1 are simply different areas of the same piece of structure, and that all of these areas are integrally part of the same structure. Further, figure 2e is an amplified showing of the pole housing 10. It also shows that the two areas of pole housing 10, as well as the gear housing 5, are all one piece.

(2) That Claims 18-21, 23, 27, 28, 30, 34-36, 38, 39 and 41-43 are not anticipated by Kobman et al.

The Examiner has rejected claims 18-21, 23, 27, 28, 30, 34-36, 38, 39 and 41-43 under 35 U.S.C. § 102 as anticipated by Kobman et al. This rejection is traversed for the following reasons.

Two independent claims, 18 and 43, stand rejected by this paragraph . Claim 18 includes the recitation "said pole housing being in one piece with at least one part of said gear housing," and claim 43 includes the recitation "said pole housing being integral with at least one part of said gear housing."

These recitations cannot be said to be included anywhere in the structure of Kobman

et al for the following two reasons.

First, it is pointed out that the disclosure of Kobman et al includes a motor housing and a pump housing. At column 3, lines 15-20 Kobman et al speak of the pump having a gear and rotor assembly 32. This is the only point in their specification where Kobman et al recite anything which might possibly imply that they include a teaching of a gear housing. And further, it can be seen from their drawings that Kobman et al do not show any gears. Thus, **Kobman et al do not disclose any gears**. Housing 36 of Kobman et al houses a pump. Thus, there are no "gears" within a "gear housing", and accordingly, **there is no "gear housing" anywhere in the teachings of Kobman et al.**

Accordingly, there can be no gear housing within the teachings of Kobman et al, and certainly there is no motor housing which is integral with any part of a gear housing.

Second, and even more importantly to the overall consideration and allowability of the claims, even if housing 36 of Kobman et al can somehow be said to be a gear housing, there is no part of this housing is integral with the pole housing 26 of Kobman et al, contrary to recitations in both claims 18 and 43. In Kobman et al one housing element 28 is surrounded by a second housing element 26. These housing elements are not integral. Instead, Kobman et al need to supply seals between the two housings. While they are not numbered, O-rings can be seen in figure 1 of Kobman et al at either end of housing element 26. Clearly, housing elements 36 and 26 of Kobman et al cannot be considered to be integral, as would be required to fulfill the requirements of a 35 USC 102 rejection of independent claims 18 and 43.

It is noted that, according to the advantages pointed out at the beginning of the specification, the structure which is taught by this application makes assembly of the parts for a drive unit of the type disclosed to be much simpler and easier. This is especially advantageous when the numerous quantities of such assemblies which are required in present day manufacture of automobiles, an environment where this invention is likely to gain much use, is considered.

Additional independent claims add further details which the reference to Kobman et al does not teach. For example, claims 19, 27, 28, 41 and 42 each recites that the housing is plastic, or at least partially of plastic. While Kobman et al speak of plastic for housing 68, which is part of their commutator, nowhere does this reference teach that the motor housing itself can be made of plastic. Again, this is another defect for a rejection under 35 USC 102, which is the statute used to reject these claims. The examiner points to the abstract as teaching that the housing can be made of plastic. But again, this is a teaching of the commutator being made of plastic, not the motor housing.

Claims 23 and 38 both recite that the short-circuit element is one piece. Kobman et al is silent as to what his short-circuit element, or pole piece is. It is probably the element shown by Kobman et al which is positioned between magnets 40 and housing 26. Even if this guess is true, it is improper for the examiner to somehow decide that it is one piece, as Kobman et al are certainly silent on this point and do not comment at all about their short-circuit (pole piece) element.

Claim 30 adds that the end shield is axially positionable .... in order to adjust the longitudinal play of the armature. This structure also is not found in the reference to Kobman

et al, wherein the structure shown definitely fixes the bearing in place at only one spacing so that there is no adjustment in the play of the rotor of the motor.

Claim 39, which is believed to be among the rejected claims by mistake, includes as part of its recitations that the short-circuit element comprises a mixture of plastic and magnetically conductive material. This feature also is not found anywhere in the reference to Kobman et al .

(3) That Claims 31-33 are not unpatentable over the references to Kobman et al in view of Bobay et al.

The examiner has rejected claims 31-33 under 35 USC 103(a) as being unpatentable over Kobman et al in view of Bobay et al.

This rejection is traversed for the following reasons.

First, as pointed out above, the reference to Kobman et al does not teach all of the structure of the claims on which these claims depend. Additionally, the reference to Bobay et al does not add to the teachings of Kobman et al which in any way could be said to fill in the teachings which lacking in Kobman et al.

The examiner states that the reference to Bobay et al is being cited to show that it is well know to secure sections of a housing together by adhesive bonding, ultrasonic welding, or by heat treatment. This does not supply the basic structural difference which is missing from Kobman et al, that the housings are integral.

(4) That Claims 22 and 37 are not unpatentable over the references to Kobman et al in view of Kabatnik et al.

The examiner has rejected claims 22 and 37 under 35 USC 103(a) as being unpatentable over Kobman et al in view of Kabatnik et al. While the examiner has stumbled a bit over whether this rejection is based on Kobman et al or Bobay et al as the primary reference, (please note the Final Rejection at paragraph 7 line 4) it is fairly certain that the examiner's intention was to use Kobman et al as the basic reference.

This rejection is traversed for the following reasons.

First, as pointed out above, the reference to Kobman et al does not teach all of the structure of the claims on which these claims depend. Additionally, the reference to Kabatnik et al does not add to the teachings of Kobman et al which in any way could be said to fill in the teachings which lacking in Kobman et al.

The examiner states that the reference to Kabatnik et al is being cited to show that two half shells 50 (we suspect the examiner meant 12a and 12b, since 50 is the dividing line of the two half shells). However, claims 22 and 37 recite that the short-circuit elements comprise at least two shells. This is not the same as the two shells 12 a and 12b shown by Kabatnik et al. The shells shown by Kabatnik et al are shells of the housing, not short-circuit elements. Thus, considering the reference to Kabatnik et al closely, it is confusing as to why the examiner would use such a reference as Kabatnik et al as a teaching of two shells used as the short-circuit elements. Kabatnik et al does not in any way teach the use of two half shells as short-

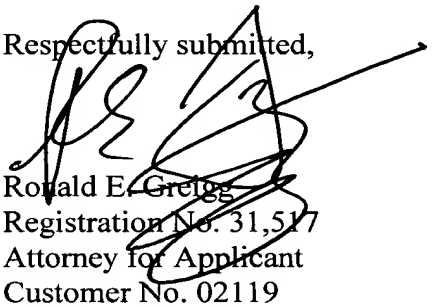
circuit elements. Accordingly in this rejection there is a complete lack of anything which teaches two shells used as short-circuit elements.

For the above reasons, appellant believes that each of the rejections made by the examiner should be reversed, and that all of the claims should be held to be allowable over the prior art of record.

VIII - CLAIMS APPENDIX

An appendix containing a copy of the claims involved in this appeal, is attached.

Respectfully submitted,



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APPENDIX, THE CLAIMS ON APPEAL

18. An electric drive unit (1), in particular for drives in a motor vehicle, comprising an electric motor (15), having a rotor (20) with a shaft (28) and a pole housing (10), said pole housing (10) including an end shield (43), a motor bearing (45) for the rotor (20), and at least one magnet (32) and a short-circuit element (36), and a one- or multi-part gear housing (5), connected to said pole housing (10), said pole housing (10) being in one piece with at least one part of said gear housing (5).

19. The electric drive unit of claim 43, wherein the pole housing (10) is formed at least partly of plastic.

20. The electric drive unit of claim 43, wherein the at least one magnet (32) is at least partly surrounded by the material of the pole housing (10).

21. The electric drive unit of claim 43, wherein the short-circuit element (36) forming a short circuit for the at least one magnet (32) is at least partly surrounded by the material of the pole housing (10).

22. The electric drive unit of claim 43, wherein the short-circuit element (36) comprises at least two shells.

23. The electric drive unit of claim 43, wherein

the short-circuit element (36) is embodied in one piece.

24-26. Not involved in this appeal

27. The electric drive unit of claim 43, wherein

in the pole housing (10), the at least one magnet (32) is secured in place by engagement against a shoulder formed in the plastic of the pole housing (10) and by engagement with the short-circuit element (36) located radially outward.

28. The electric drive unit of claim 43, wherein

in the pole housing (10), the short-circuit element (36) is secured by engagement against a shoulder formed in the plastic of the pole housing (10) and by engagement with the radially inner magnet (32).

29. Not involved in this appeal.

30. The electric drive unit of claim 43, wherein

the rotor (20) has an axial longitudinal axis (30), and

the end shield (43) for the rotor (20) is disposed, axially positionably, on the pole housing in order to adjust the longitudinal play of the armature.

31. The electric drive unit of claim 30, wherein

the end shield (43) is secured to the pole housing (10) by adhesive bonding.

32. The electric drive unit of claim 30, wherein

the end shield (43) is secured to the pole housing (10) by ultrasonic welding.

33. The electric drive unit of claim 30, wherein

the end shield (43) is secured to the pole housing (10) by a heat treatment.

34. The electric drive unit of claim 43, wherein

the shaft (28) is supported, oriented toward the gear housing (5), in an armature bearing (48) which is at least partly surrounded by the material of the pole housing (10).

35. The electric drive unit of claim 19, wherein

the at least one magnet (32) is at least partly surrounded by the material of the pole housing (10).

36. The electric drive unit of claim 35, wherein

the short-circuit element (36) forming a short circuit for the at least one magnet (32) is at least partly surrounded by the material of the pole housing (10).

37. The electric drive unit of claim 35, wherein

the short-circuit element (36) comprises at least two shells.

38. The electric drive unit of claim 36, wherein

the short-circuit element (36) is embodied in one piece.

39. The electric drive unit of claim 19, wherein

the short-circuit element (36), comprising a mixture of plastic and magnetically conducted material, is at least partly surrounded by the material of the pole housing (10).

40. Not involved in this appeal.

41. The electric drive unit of claim 19, wherein

in the pole housing (10), the at least one magnet (32) is secured by engagement against a shoulder formed in the plastic of the pole housing (10) and by engagement with the short-circuit element (36) located radially outward.

42. The electric drive unit of claim 19, wherein

in the pole housing (10), the short-circuit element (36) is secured by engagement against a shoulder formed in the plastic of the pole housing (10) and by engagement with the radially inner magnet (32).

43. An electric drive unit (1), in particular for drives in a motor vehicle, including:

an electric motor (15), having a rotor (20) with a shaft (28) and a pole housing (10), said pole housing (10) including at least one magnet (32), a short-circuit element (36), and an end shield (43) integrally containing a motor bearing (45) for the rotor (20),

a one-or-multi-part gear housing (5), which is connected with the pole housing (10), said pole housing (10) being integral with at least one part of said gear housing (5),

the drive unit characterized in that:

the end shield (43) is a part of the pole housing (10), and

the at least one magnet (32) rests in part directly against the pole housing (10) and is held at least in part directly by the pole housing (10).